

HIGH BUILD EPOXY COATING

epigen 1311

TECHNICAL BULLETIN

A solventless, high build protective coating, designed to combat corrosive conditions in tanks, wells, structural members and fluid transfer systems. It cures at ambient temperatures to form a tough, semi-flexible coating possessing good chemical resistance and U.V. stability, adhering strongly to suitably prepared metal, wood and concrete surfaces

Suitable for use in the water industry in both Hydrogen Sulfide rich WWTP & Potable Water applications, this high performance, epoxy polymer lining is designed to meet high standards of resistant to sea water, mineral acids and alkalis, hydrocarbons, oil and fuel, and is suitable in applications where fine particulate matter may be present.

1311 is primarily a barrier coating or lining for the treatment of steel, concrete or brick.

TYPICAL APPLICATIONS

Waste Water Plants	Drinking Water Systems
Pipelines & Valves	Ducting Systems
Cooling Towers	Process Tanks & Vessels
Seawater Cooling Systems	



PROFILE

Ratio by weight	2 parts "A" to 1 part "B"
Pot Life minutes @ 24°C	60
Mixed consistency @ 24°C	Flowable Liquid
Specific gravity when mixed	1.4
Kg/m ² for 500 micron	0.7
Tack free time @ 24°C	180 minutes

TYPICAL CURED PROPERTIES

Compressive strength ASTM D695, Mpa	>110
Tensile strength ASTM D638, Mpa	>25
Flexural strength ASTM D790, Mpa	>50
Tensile Adhesion ASTM 4541, MPa	>12
Hardness, Shore D	80
Dielectric Breakdown Voltage ASTM D149 (Kv)	31
Dielectric Constant ASTM D150 (150KHz)	3.1
Coeff of Therm Exp ASTM C531, 10 ⁻⁵ /°C	3.0
Maximum exposure temperature, °C	120
Heat deflection temperature ASTM D648, °C	70
Thin Film Gel, (min recoat time) Minutes	90
Maximum recoat time, Hours	48
Ultimate cure time to Service, Hours	120

This information is supplied as an indicative reference only. Caution should be used where direct comparisons are to be made.

FEATURES

- Highly erosion resistant filler within polymer system
- Application DFT up to 1000 micron in the one coat
- Free of all solvents - zero VOC
- Engineered for high mechanical strength
- Outstanding adhesion to wet or oily surfaces
- Resistant to organic solvents
- Versatility in application - can be used with GF
- Outstanding resistance to acid & alkali

POTABLE WATER SUITABILITY

Assessed to
AS/NZS4020:1999 "PRODUCTS FOR USE IN
CONTACT WITH DRINKING WATER"
Passed all requirements

SURFACE PREPARATION

Methods for substrate preparation may include abrasive blasting, high pressure water blasting, chemical means such as etching or pickling, or hand tool methods.

Every effort should be maintained in selecting a technique that provides satisfactory adhesion for the lining in the given service.

Specialist advice is available to ensure correct preparation procedure is employed for specific applications.

APPLICATION

Mixing of product should be carried out using slow speed mixers and completed by adding to the part "A", the part "B". Ensure the mix is homogenous and free from lumps. Avoid air entrainment.

Epigen 1311 can be applied either by airless spray, brush or roller. Since it does not contain solvents, application by spray allows the application of high film thicknesses in single coats, and ensures minimal issues with solvent entrapment or shrinkage.

Epigen 1311 is of higher viscosity than conventional solvent containing coatings and application may require more specialised practices but is generally compensated for by the speed of application and need to apply fewer coats.

Epigen 1311 provides functional performance as a coating or lining. It may not provide aesthetic properties such as high gloss or colour retention.



CHEMICAL RESISTANCE

Tested at 21°C. Samples cured for 10 days at 25°C.

Curing at elevated temperatures will improve chemical resistance.

1 = Continuous or long term immersion

2 = Short term immersion

3 = Splash and spills

4 = Avoid contact

Acetic Acid, 10 %	1	Acetone	2
Acetic Acid, Glacial	2	Ammonium Chloride	1
Hydrochloric Acid, 5 %	1	Beer	1
Hydrochloric Acid, 10 %	1	Dichloromethane	2
Hydrochloric Acid, conc	1	Diesel Fuel	1
Nitric Acid, 5 %	1	Isopropyl Alcohol	1
Nitric Acid, 10 %	1	Kerosene	1
Phosphoric Acid, 5 %	1	Petrol	1
Phosphoric Acid, 20 %	1	Salt Water	1
Sulfuric Acid, 5 %	1	Sewage	1
Sulfuric Acid, 20 %	1	Skydrol	1
Ammonium Hydroxide, 5 %	1	Sodium Cyanide	1
Ammonium Hydroxide, 20 %	1	Sodium Hypochlorite	1
Potassium Hydroxide, 5 %	1	Toluene	1
Potassium Hydroxide, 20 %	1	Trichloroethane	2
Sodium Hydroxide, 5 %	1	Wine	1
Sodium Hydroxide, 20 %	1	Xylene	1

This information is supplied as an indicative reference only.

Caution should be used where direct comparisons are to be made.

CURE

Variations in cure may arise due to the amount of material being applied, the thickness of material being applied, the surface temperature, and the product temperature. The cure may be increased by heating product or by leaving mixed material stand for 15 minutes before use. The cure may be decreased by cooling the product before mixing.

EPIGEN PRODUCTS

MANUFACTURED BY

Peerless Industrial Systems Pty Ltd

ABN 14 097 615 391

79 Robinson Ave, Belmont, WA 6104

PO Box 407, Cloverdale, WA 6985

Phone: (08) 9477 3788 Fax: (08) 9477 3766

Email: service@peerlessindustrialsystems.com

www.peerlessindustrialsystems.com

www.epigen.com.au